Stocking and species composition of second growth forests in Peninsular Malaysia.

ABSTRACT

Management of the production forests in Malaysia is currently undergoing a major change as the total extent of undisturbed forest being harvested is diminishing. Currently most of the harvesting operations are being conducted in second growth (rotation) forests and in the near future all production forest will solely consist of only logged forests. This is expected to result in a significant reduction of the supply of raw materials to the industry because second growth forest stands are generally poorer and not so well-stocked with quality timber species. According to the forest management systems applied to these forests, namely the Selective Management System (SMS) and the Malayan Uniform System (MUS), the residual forests should be able to recover in the specified rotation cycle and there should be sufficient quality crop for the second and subsequent harvests. To understand the situation, a study was carried to assess the stocking and species composition of second rotation forests in two production forests located in Tekam Forests Reserve, Pahang and Cherul Forest Reserve, Terengganu. The study results indicated that the second rotation forests are not as productive as predicted but still able to produce an economic harvest in terms of total timber yield within the specified rotation cycle. However, based on inventory projections of existing stocks, it was found that in general the forests have not fully recovered in terms of stocking of commercial species. Species composition has been altered favouring higher dominance of non-dipterocarp species. Some of the major factors that could have contributed to this phenomenon are slower recovery of the forest after the first cut, higher mortality due to logging damage, and implementation of cutting limit prescriptions that favour high removal of dipterocarps as they are dominant in the upper diameter classes. It must be noted that the second growth forest assessed were those that were more than 20 years old. Currently, forest management practices have improved significantly and thus the recent second growth forests are expected to be in a much better condition. The information generated from this project on the status of the stocking and species composition of second growth forest will be essential for improving planning and management of the resource with the aim of enhancing future productivity.

Keyword: Second growth forest; Stocking; Species composition; Forest management